

## WHAT IS CLAIMED IS:

1. A cryostat comprising:
  - a cryostat chamber;
  - a microtome inside the cryostat chamber for cutting frozen
  - specimens; and
  - an illumination device including at least one LED for illuminating the cryostat chamber.
2. The cryostat as defined in Claim 1, wherein the illumination device includes an illumination module having a plurality of LEDs.
3. The cryostat as defined in Claim 2, wherein the illumination module comprises a housing having a plug connector for connecting a power supply system to the illumination module.
4. The cryostat as defined in Claim 2, further comprising a power supply system, wherein a plurality of the illumination modules are provided and electrically connected to the power supply system.
5. The cryostat as defined in Claim 2, further comprising a circuit arrangement for controlling the illumination module.
6. The cryostat as defined in Claim 4, further comprising a circuit arrangement for individually and/or collectively controlling the plurality of illumination modules.
7. The cryostat (1) as defined in Claim 5, wherein the circuit arrangement enables dimming of the illumination module.

8. The cryostat as defined in Claim 6, wherein the circuit arrangement enables individual and/or collective dimming of the plurality of illumination modules.
- 5 9. The cryostat as defined in Claim 4, wherein the cryostat chamber includes a cover that can be opened and closed, and the cryostat further comprises a switch electrically connected to the circuit arrangement and activated by opening and closing of the cover, whereby the switch automatically signals the circuit arrangement to control at least one of the plurality of illumination modules upon opening and closing of the cover.
- 10 10. The cryostat as defined in Claim 2, wherein the illumination module includes a splash protector for protecting the plurality of LEDs.